RESPONSE TO COMMENT ON KELLY ET AL.

Subclinical First Trimester Renal Abnormalities Are Associated With Preeclampsia in Normoalbuminuric Women With Type 1 Diabetes. Diabetes Care 2018;41:120–127

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We thank Foussard et al. (1) for their interest in our study (2). We agree that caution is required when identifying predictive markers of clinical interest in pregnant women with diabetes with regard to preeclampsia (PE). Accurate estimation of renal function is critical for the care of pregnant patients. Alper et al. (3) highlighted the limitations of currently available formulas for accurately predicting the glomerular filtration rate (GFR) in patients with PE. Our study focused on markers of renal function early in pregnancy prior to the clinical onset of PE.

We studied a population with type 1 diabetes, thus at high risk of PE, starting at the first trimester. We did not have preconception data and recognize that GFR can increase by up to 25% during the first trimester of a normal pregnancy (4) and that data in type 1 diabetes are lacking. We excluded women with microalbuminuria and/or hypertension at baseline (12 weeks' gestation). Not previously reported, but consistent with their elevated estimated GFR, serum creatinine was lower at ~12 weeks' (51.6 ± 5.9 vs. 56.2 ± 6.9 μmol/L, P = 0.02) and ~22 weeks' (50.7 ± 5.5 vs. 55.3 ± 8.5 μmol/L, P = 0.04) gestation in women with type 1 diabetes who later developed PE versus those who did not, but it did not differ between these groups at 32 weeks' gestation (54.5 ± 7.9 vs. 56.0 ± 8.0 μmol/L, P = 0.53).

In contrast, Foussard et al. (1) found higher serum creatinine at 25 weeks' gestation in seven women with gestational diabetes mellitus (GDM) who later developed PE versus the 90 women who did not. Clearly, the two cohorts are different in terms of size, type of dysglycemia, and incidence of PE. Furthermore, neither the renal nor the hypertension status of the GDM cohort, either preconception or earlier in pregnancy, is presented, and possibly the GDM women were further advanced in the evolution of subclinical renal disease than our type 1 diabetes cohort (in whom any clinically evident renal dysfunction was an exclusion).

We fully agree that confirmatory studies will be essential before any of these findings can be translated to clinical use, but we consider that they provide important clues to underlying reasons for susceptibility to PE in women with diabetes.

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